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TITLE: POLYSILICON FILM AND ITS FORMING
METHOD

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ABSTRACT:

PROBLEM TO BE SOLVED: To provide a method for forming a polysilicon film by crystallizing an amorphous silicon film using a metallic catalyst in which the catalyst remaining as impurities in the film is eliminated substantially and a polysilicon film having uniform material characteristics over the entire film can be formed with a quick throughput.

SOLUTION: An amorphous silicon film 104 is formed on a substrate 102 by

physical vapor deposition and after a silicon dioxide layer 106 having a window 108 is deposited on the amorphous silicon film 104, a metallic catalyst is introduced into the amorphous silicon film 104. The amorphous silicon film 104 is then annealed so that a crystallization region (polysilicon film) is formed by pure metal induced crystallization. After the amorphous silicon film 104 is annealed, the crystallization region is irradiated with excimer laser light as required.

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